

# EDAN

## **PatientCare Viewer**

Data Management Software

Release 1.4

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# About this Manual

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## Statement

This manual will help you understand the operation and maintenance of the product better. It is reminded that the product shall be used strictly complying with this manual. User's operation failing to comply with this manual may result in malfunction or accident for which EDAN INSTRUMENTS, INC. (hereinafter called EDAN) can not be held liable.

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## Responsibility of the Manufacturer

EDAN only considers itself responsible for any effect on safety, reliability and performance of the equipment if:

Assembly operations, extensions, re-adjustments, modifications or repairs are carried out by persons authorized by EDAN, and

The electrical installation of the relevant room complies with national standards, and

The instrument is used in accordance with the instructions for use.

Upon request, EDAN may provide, with compensation, necessary circuit diagrams, and other information to help qualified technician to maintain and repair some parts, which EDAN may define as user serviceable.

## Terms Used in this Manual

This guide is designed to give key concepts on safety precautions.

### **NOTE**

A **NOTE** provides useful information regarding a function or a procedure.

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# Chapter 1 Software Overview

PatientCare Viewer Data Management Software is used for the data management of M3/M3A/M3B vital signs monitors, M8/iM8/M9/iM9/M50/iM50/M80/iM80 patient monitors, elite V8 (hereafter called V8) monitors, and H100B/H100N/VE-H100B pulse oximeters. You can check the monitoring data via reviewing trend, alarm, NIBP, waveform, arrhythmia, quick temperature, 12-lead diagnosis in the software.

Perform the following procedures:

1. Install the PatientCare Viewer to PC.
2. Import data to PatientCare Viewer from USB disks, folders on PC, or from monitors.
3. Review or print the imported patient trend data.

## 1.1 Running Environment

**The working conditions of the system:**

Environment Temperature: + 5°C ~ + 40°C

Relative Humidity: 25% ~ 80%

Atmospheric Pressure: 860hPa ~ 1060hPa

## 1.2 System Requirement

1. Desktop PC or laptop;
2. Operating system: Microsoft Windows XP Professional (with Service Package 2 or Service Package 3) or Windows 7;
3. CPU: it is recommended to use dual-core CPU;

4. Memory: 1G or above;
5. Resolution: 1280 x 1024, 1440 x 900 or above.

**NOTE:**

- 1 This software is not intended for the home healthcare environment.
- 2 The pictures and interfaces in this manual are for reference only.

# Chapter 2 Installation & Uninstallation

## 2.1 Installing the Program

To install the program, do as follows:

1. Run the **Setup** file in the disc, and you will see the following interface:



2. Click **USB SENTINEL** to install the sentinel. (It is needless to install it for H100B/H100N/VE-H100B oximeters.)
3. Click **PatientCare Viewer** to install the software.
4. For importing data from H100N oximeters, you should install **Serial Driver**. (It is needless to install it for M3/M3A/M3B monitors, M8/iM8/M9/iM9 monitors, M50/iM50/M80/iM80

monitors, V8 monitors or H100B/VE-H100B oximeters.)

5. Click **Finish** to finish the installation.

## 2.2 Uninstalling the Program

To uninstall the program, do as follows:

1. Select **Add/Remove Program** from the **Control Panel**.
2. Select **PatientCare Viewer** and then click **Change/Delete**.
3. Click **Yes (Y)** in the pop-up dialog box.
4. The system automatically uninstalls the software.

Also, you can directly uninstall the program via **Start > All Programs > PatientCare Viewer > Uninstall**.

### **NOTE:**

The imported data will be deleted. Please back up the database and the 12-lead waveform data in advance if necessary (Directory of the database: D:\DB\PC\_MANAGER.mdb. Directory of the 12-lead waveform data: software installation directory\PatientCare Viewer\MCD\_ECG12LeadsData).

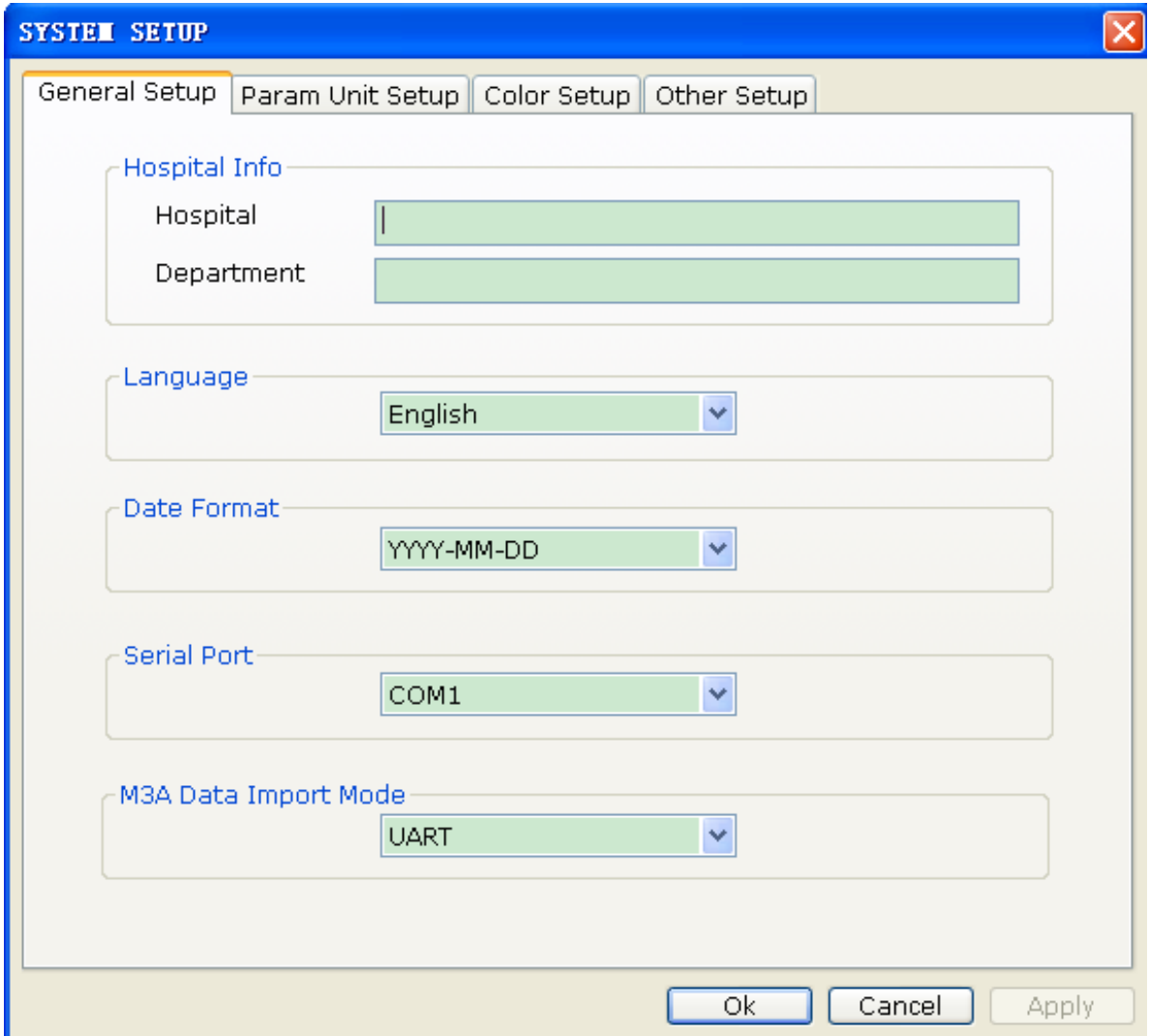


# Chapter 3 Setup

## 3.1 System Setup



Click **SETUP** to open the following dialog box:



### ◆ General Setup

**Hospital Info:** Input the name of the hospital and department.

**Language:** Select the displaying language. After the setup, please reboot the PatientCare Viewer.

**Date Format:** Set the date format to **MM-DD-YYYY**, **DD-MM-YYYY** or **YYYY-MM-DD**. After the setup, please reboot the PatientCare Viewer.

**Serial Port:** Set the serial port to the available one.

**M3A Data Import Mode:** Choose either the ETHERNET mode or UART mode.

### ◆ Parameter Unit Setup

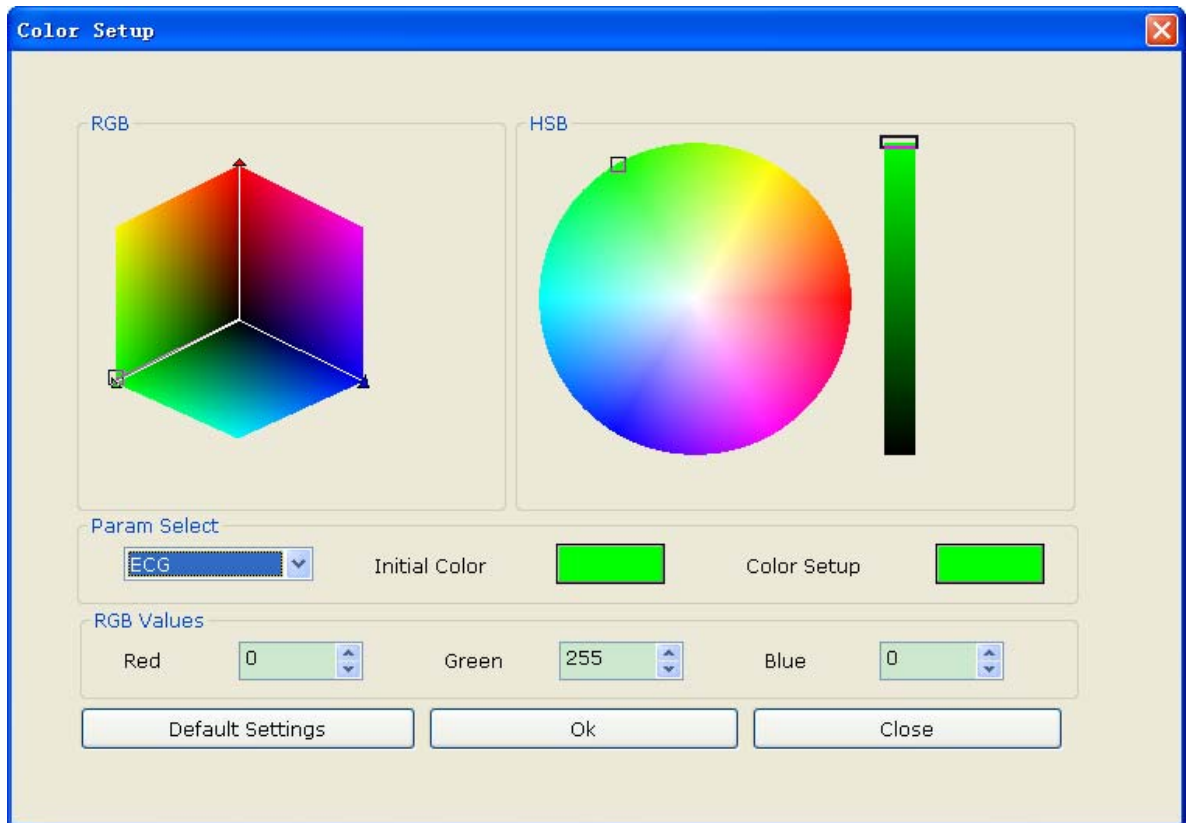
Select the units of IBP, NIBP, CO<sub>2</sub>, AG, C.O.TB and TEMP.

The screenshot shows the 'SYSTEM SETUP' dialog box with the 'Param Unit Setup' tab selected. The dialog has four tabs: 'General Setup', 'Param Unit Setup', 'Color Setup', and 'Other Setup'. The 'Param Unit Setup' tab contains two groups of settings. The first group includes IBP (set to mmHg), NIBP (set to mmHg), CO2 (set to %), and AG (set to %). The second group includes C.O. TB (set to °C) and TEMP (set to °C). At the bottom of the dialog are 'Ok', 'Cancel', and 'Apply' buttons.

Parameter	Unit
IBP	mmHg
NIBP	mmHg
CO2	%
AG	%
C.O. TB	°C
TEMP	°C

### ◆ Color Setup

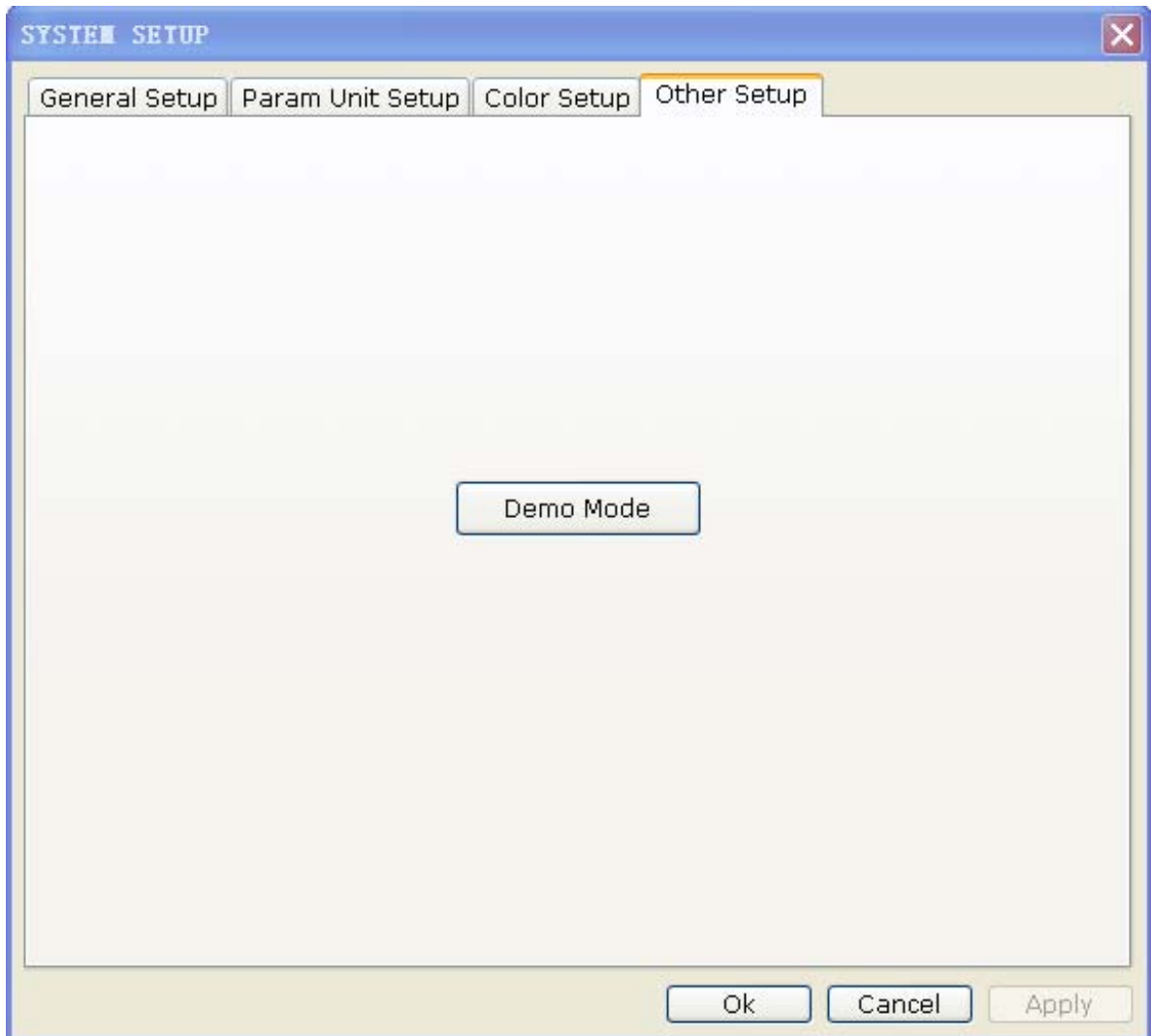
Click **Color Setup** and you will see the interface as below:



You can select a parameter from the drop-down list and set its color.

### ◆ Other Setup

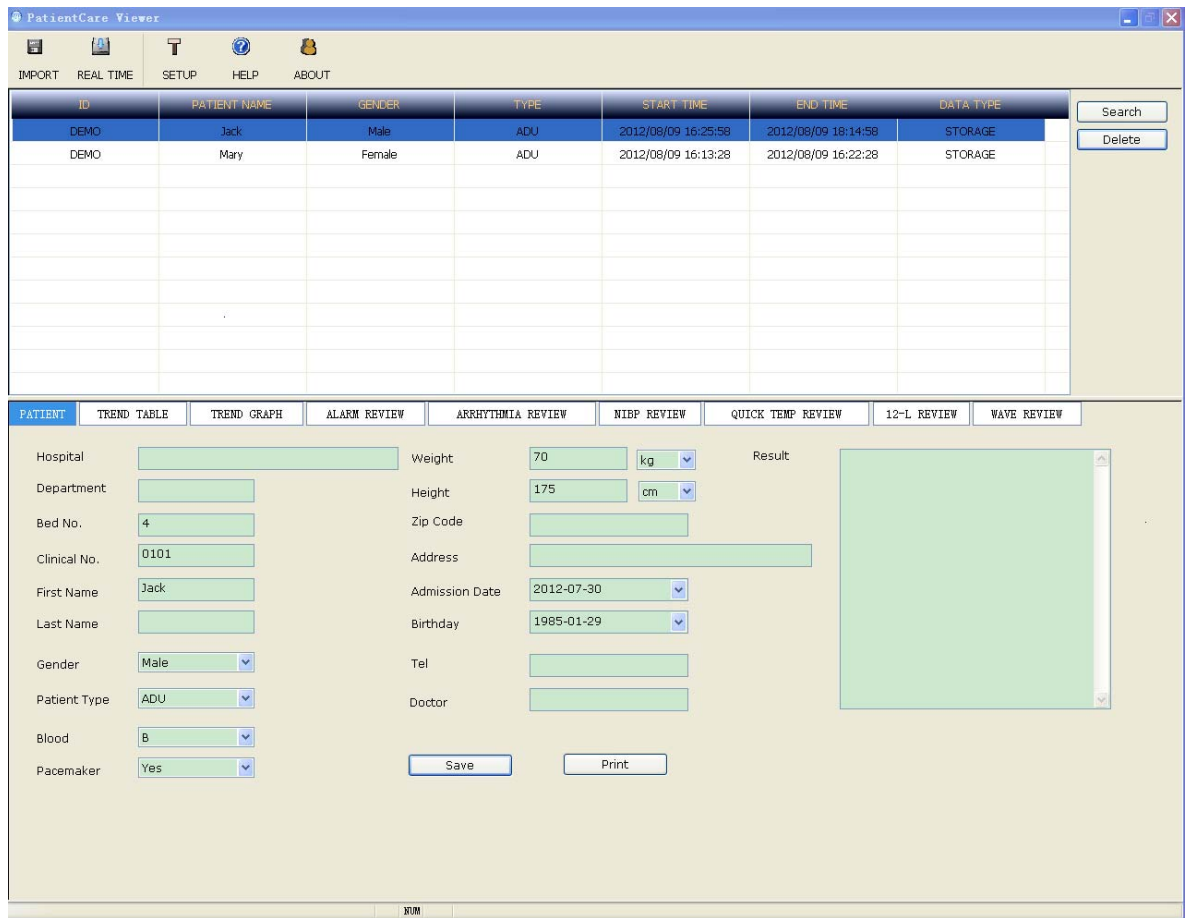
You can enter or exit from the **Demo Mode** via this submenu.

**NOTE:**

In DEMO mode, **IMPORT**, **REAL TIME**, **Search** and **Delete** functions are unavailable.

## 3.2 Patient Management

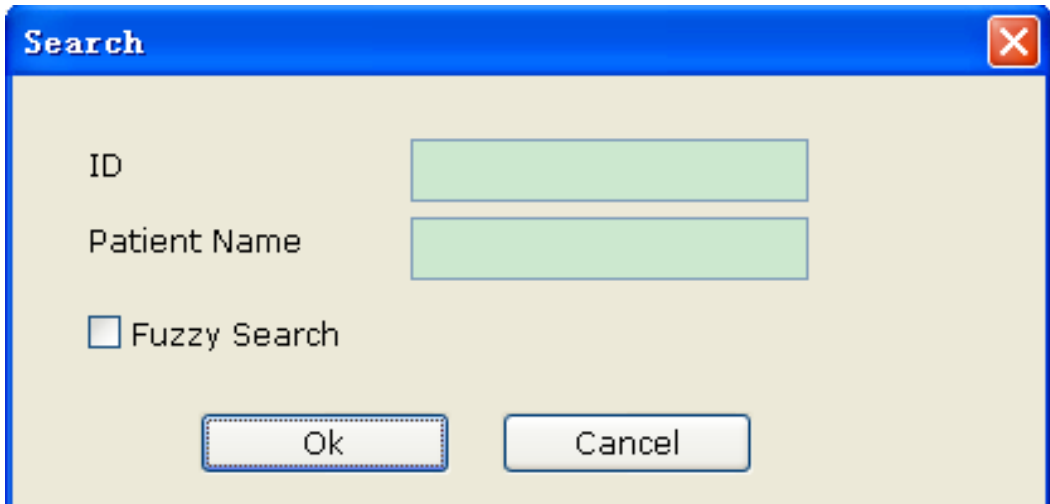
Patient information covers the patient records in the upper part of the interface and the patient information area in the lower part, as is shown in the following figure.



## 1. Patient records

Click one item in the title bar of the list to change the record sequence.

- ◆ **Search:** Search a patient by his or her **ID** or **Patient Name**, as is shown in the following box.



The image shows a 'Search' dialog box with a blue title bar. The title bar contains the text 'Search' and a close button (a red square with a white 'X'). The main area of the dialog is light beige. It contains two text input fields: 'ID' and 'Patient Name'. Below these is a checkbox labeled 'Fuzzy Search'. At the bottom are 'Ok' and 'Cancel' buttons.

- ◆ **Delete:** Select a patient from the patient list and click **Delete**, then the information of this patient will be removed.

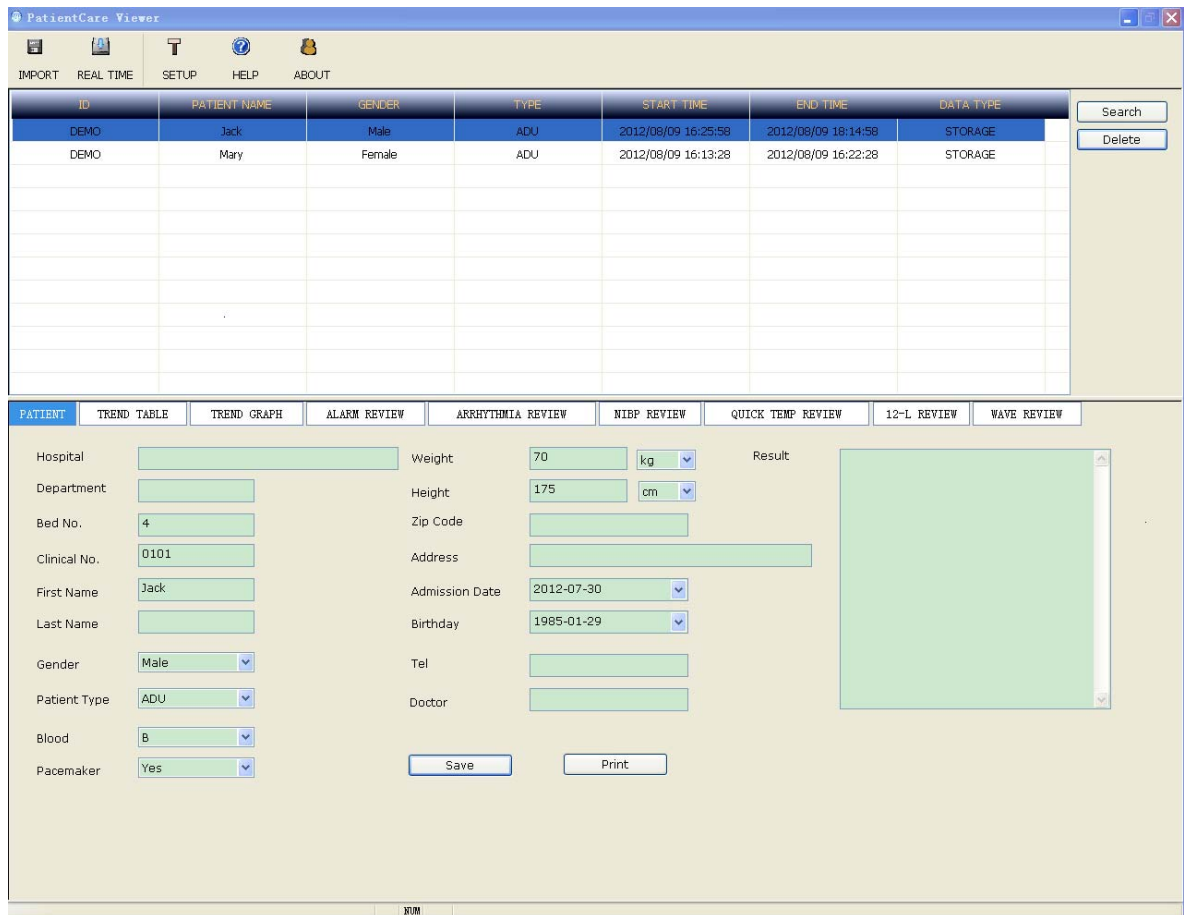
## 2. Patient information area

All the information of a patient will be displayed in the patient information area in the lower part if you select the patient's record in the list.

- ◆ **Save:** Click this item to save the change after altering the information on the interface.
- ◆ **Print:** Print the currently displayed patient information.

# Chapter 4 Importing Data

Run the PatientCare Viewer, and the main interface is displayed as follows:



## 4.1 Real Time Data

Connect the PC and the M3/M3B monitor, set the server IP address on the monitor and the IP address of the PC to the same, and then click **REAL TIME** to get real-time data from the monitor. The patient data list on the screen displays the real-time patient **ID**, **START TIME**, **Data Type**, etc.

At this time the tab changes to **STOP**, clicking it can stop importing the real-time data. Then all the patient data is displayed in the list.

**NOTE:**

- 1 The real-time data transmitting function is only available to M3/M3B monitors.
- 2 If the USB Sentinel is not plugged into the computer, the real-time data transmitting function is unavailable.

## 4.2 Data Import

You can import data to the software from M3/M3A/M3B vital signs monitors, H100B/H100N/VE-H100B pulse oximeters, M8/iM8/M9/iM9 patient monitors, and M50/iM50/M80/iM80/V8 patient monitors.

### 4.2.1 Data Import Without a USB Sentinel

When no USB Sentinel is plugged into PC, you can only import data from H100 series oximeters after you click **IMPORT** on the main interface.

After connecting H100 oximeter to PC via data cables, you can import data to the PatientCare Viewer. Before importing data, enter **SETUP > General Setup > Serial Port** to check whether the serial port is available.

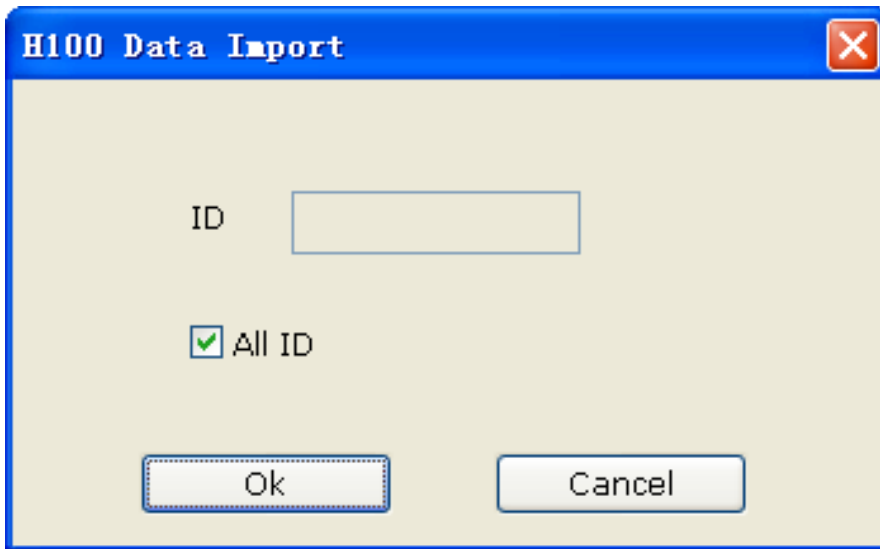
**NOTE:**

If **Serial Port** is not set correctly, the PatientCare Viewer may indicate **Link Overtime**.

1. Set the oximeter to data exporting mode. Run PatientCare Viewer

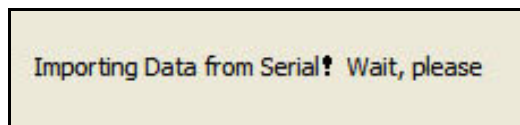


and click **IMPORT**, then the following dialog box will pop up:



By default, data of all ID will be imported. You may also deselect the tick in the check box before **ALL ID** and input a specific ID to be imported in the upper text box.

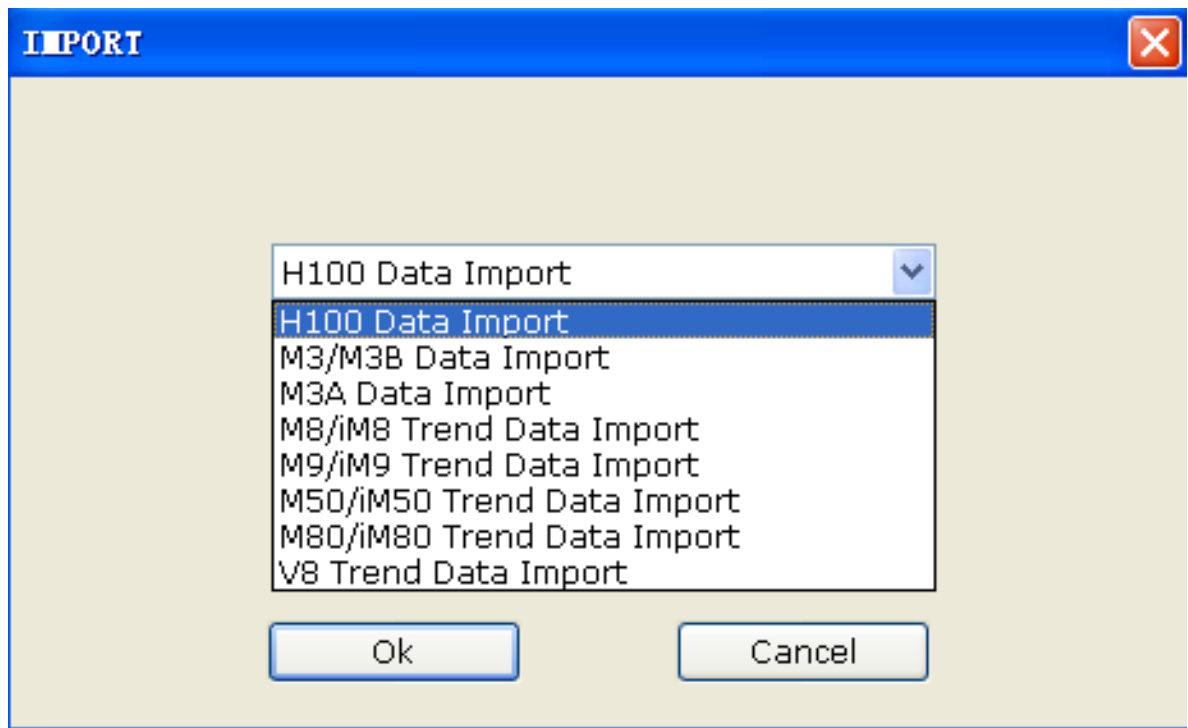
2. Click **OK** to import data from the oximeter.



You can review data in the PatientCare Viewer after the importing is completed.

### 4.2.2 Data Import with a USB Sentinel

Plug the USB Sentinel into PC and then click **IMPORT**, and you will see the interface as below:



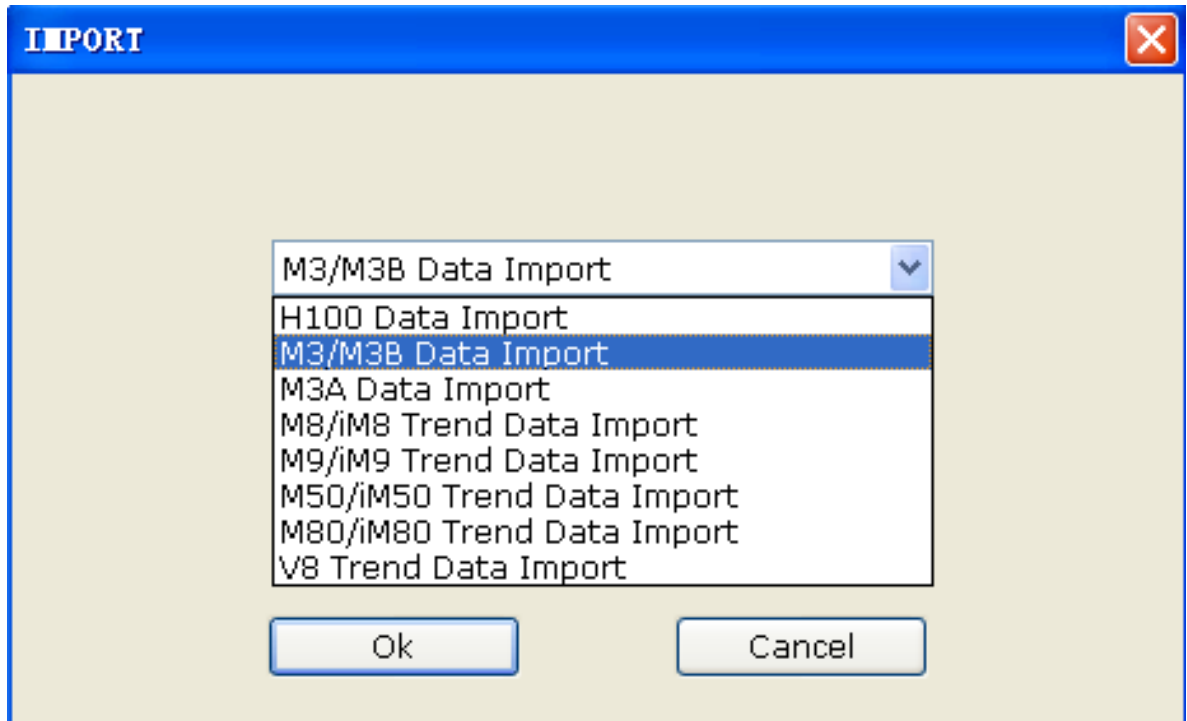
You can select a model from the drop-down list and start data importing.

#### **NOTE:**

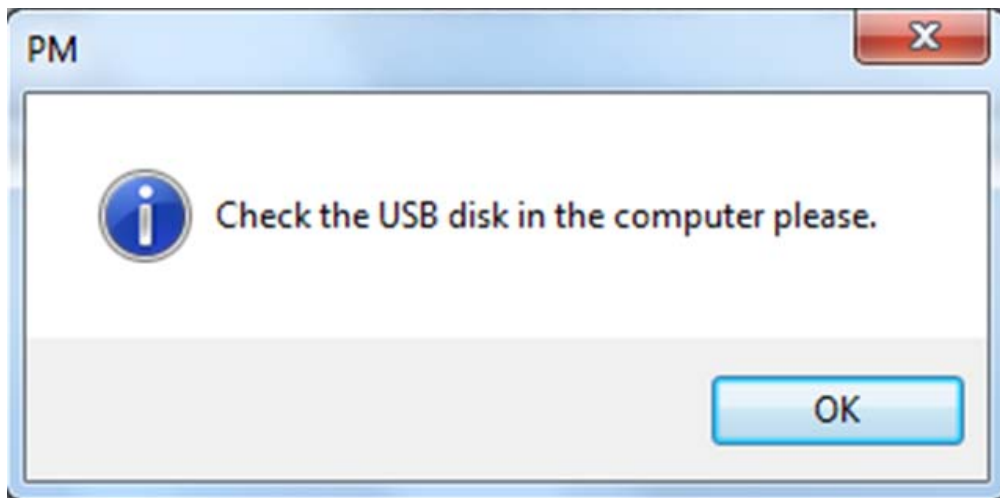
Prior to importing data by M3/M3A/M3B monitors, M8/iM8/M9/iM9 monitors, M50/iM50/M80/iM80 monitors, or V8 monitors, you should properly plug the USB Sentinel into the computer, or data importing will fail.

#### **M3 /M3B Data Import**

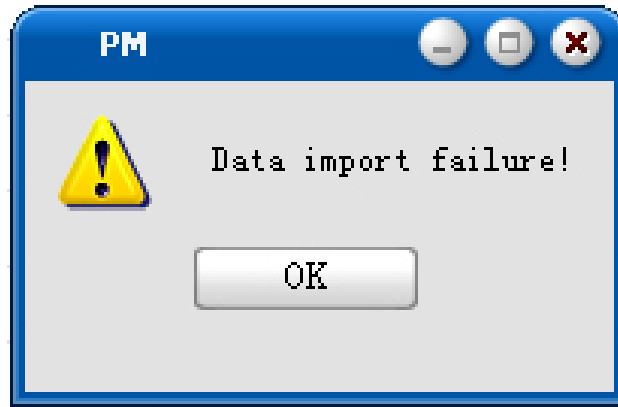
1. Connect the USB disk to the USB port on the PC.
2. Click **IMPORT** and select **M3/M3B Data Import** from the drop-down list on the interface as below:



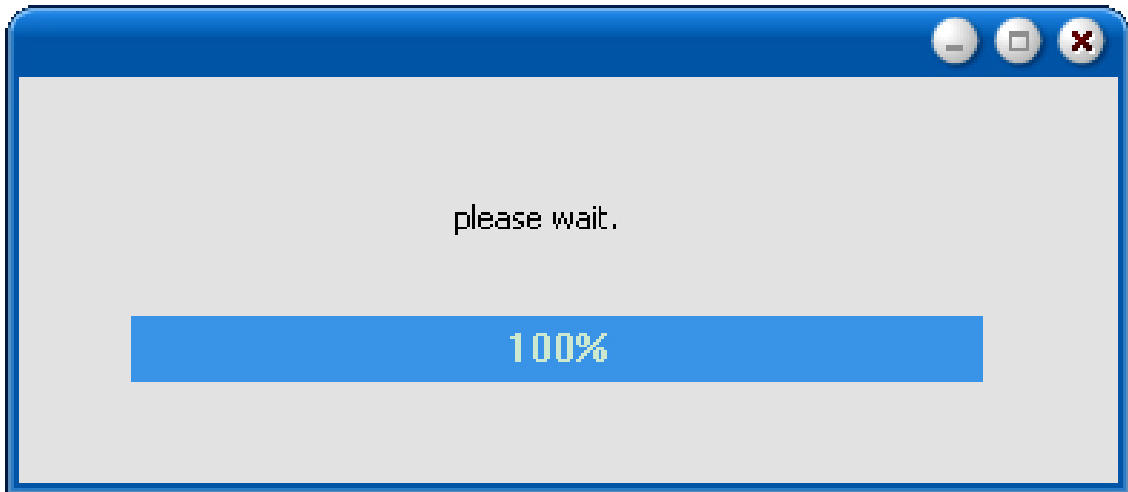
If the connection or detection fails, it prompts as follows:



3. Import files of an M3/M3B monitor saved in a USB disk or PC. You can select **Single File Import** or **All Data Import** to import a single data file or all data files. The default file name is "\*\*\*\*\*.edan". If there is no such kind of file in the USB disk, or the importing process fails, it prompts as below:



The following window appears indicating the process of data import from the USB disk to PC.



After the data import is completed, the patient information will be displayed onscreen.

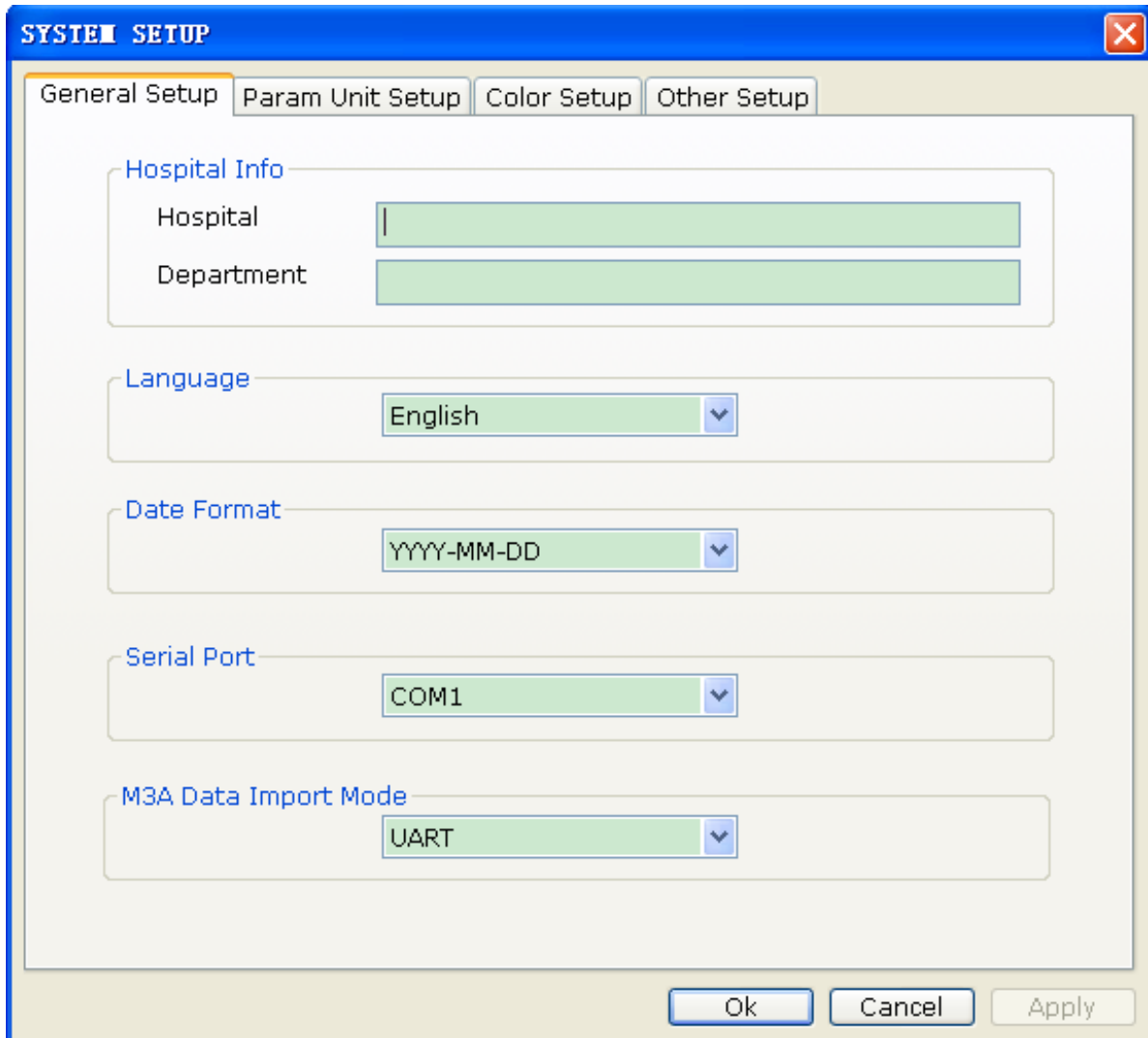
ID	PATIENT NAME	GENDER	TYPE	START TIME	END TIME	DATA TYPE
DEMO	Jack	Male	ADU	2012/08/09 16:25:58	2012/08/09 18:14:58	STORAGE
DEMO	Mary	Female	ADU	2012/08/09 16:13:28	2012/08/09 16:22:28	STORAGE

After the data is imported successfully, you can browse patient information, trend table, etc. You can also modify the patient information and print it.

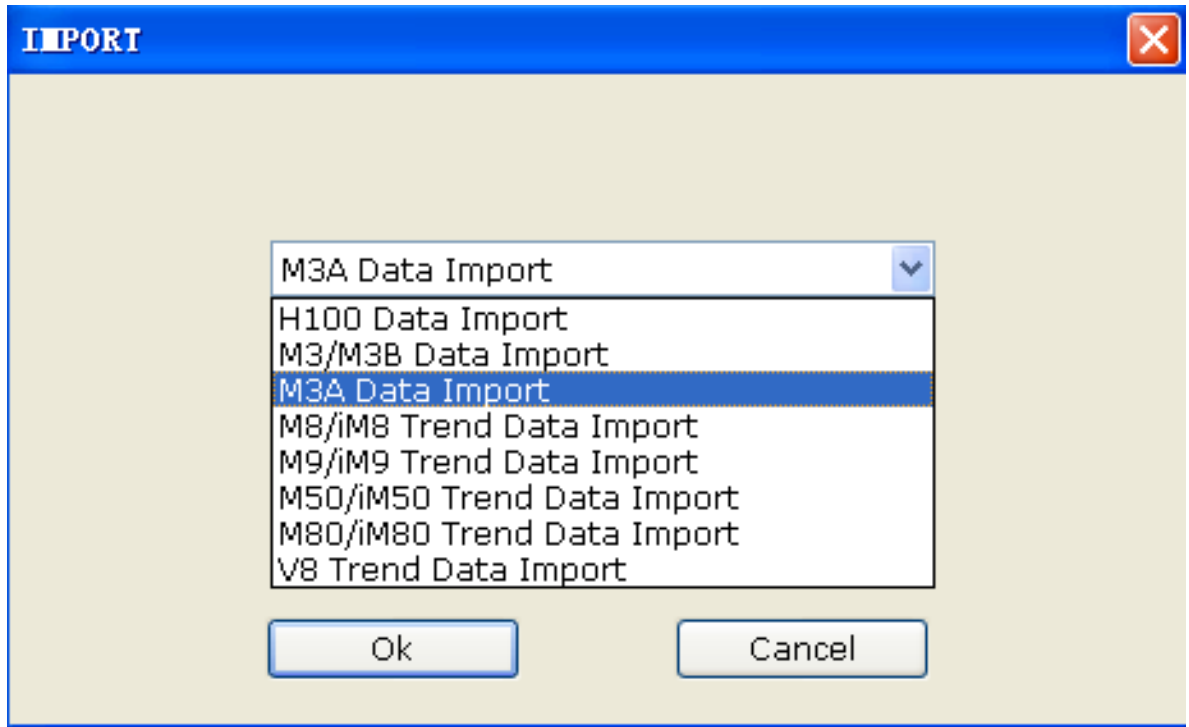
### M3A Data Import

You can import M3A data to the software either by Ethernet or by UART (Universal Asynchronous Receiver/Transmitter). If you

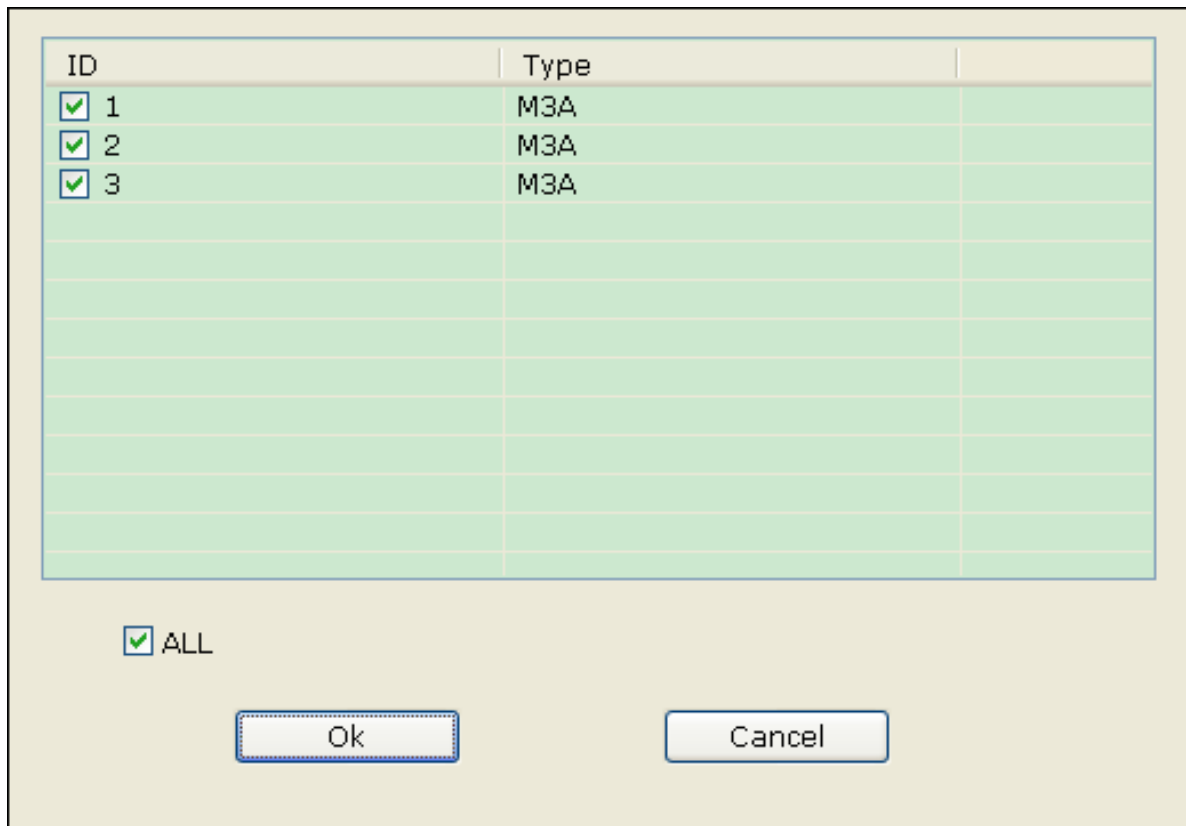
choose the Ethernet mode, use a network cable to connect the PC and M3A monitor. On the other hand, if you choose the UART mode, use the UART cable specially designed for M3A monitors. Select a mode in the **SETUP** -> **General Setup** before you import M3A data, as is shown below.



After a mode is selected, click **IMPORT** to import M3A data, as is shown in the following figure.



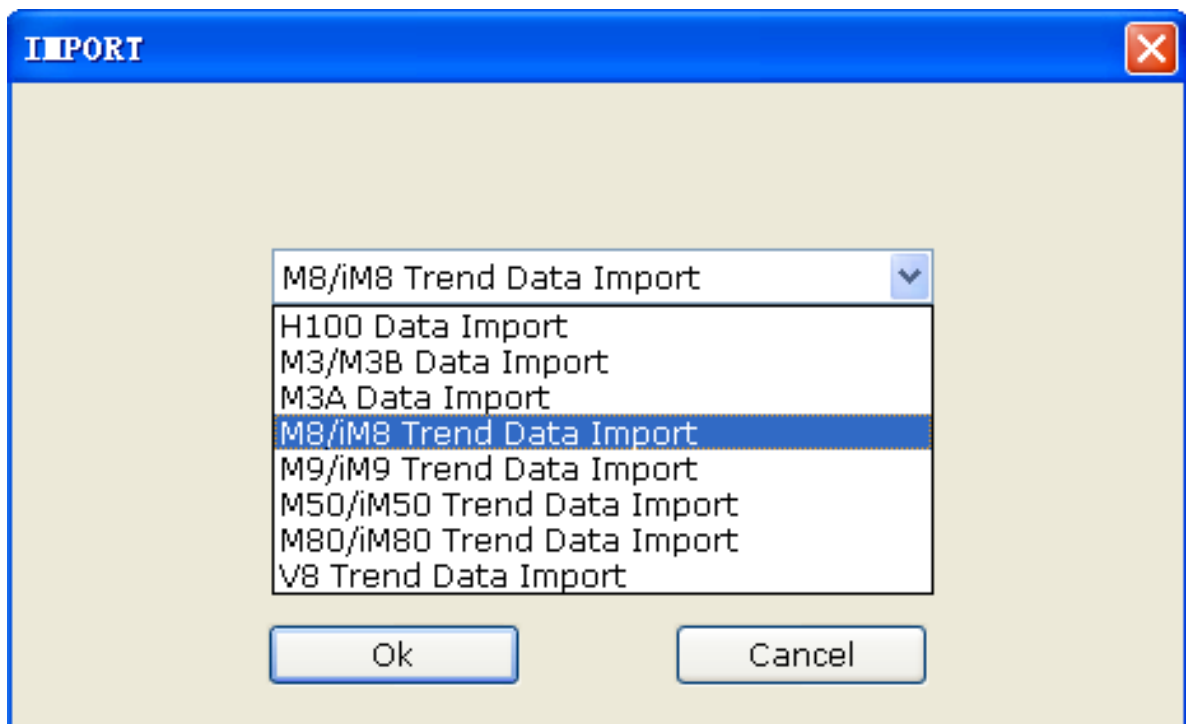
With a click on **OK**, the following box will show up. Select the ID that you need.



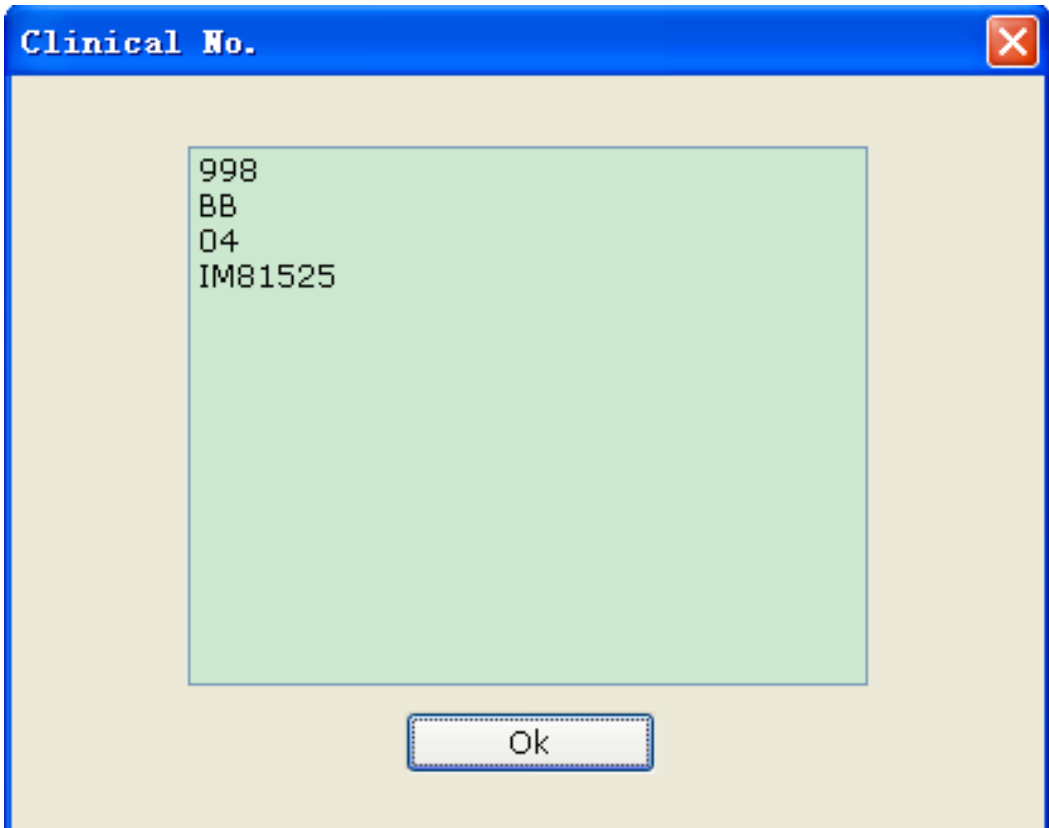
After the data is imported, the patient information of the data will be displayed in the patient record list.

### **M8/iM8/M9/iM9 Data Import**

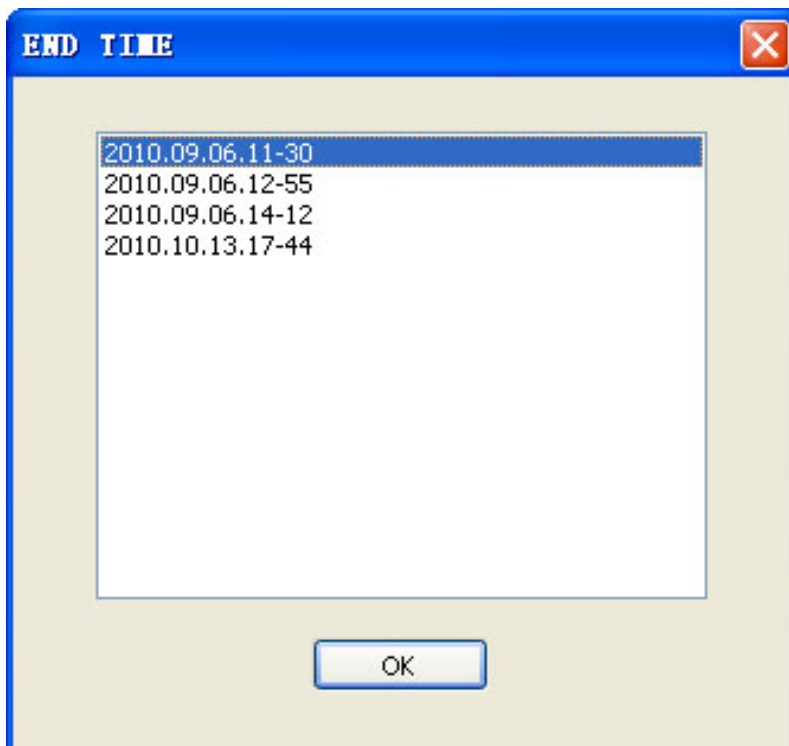
1. Connect the USB disk to the USB port of PC.
2. Click **IMPORT** and select **M8/iM8 Trend Data Import** or **M9/iM9 Trend Data Import** from the drop-down list on the interface as below:



3. Click **OK** and the interface for selecting the clinical number will be shown as below. Choose a clinical number from the list and click **OK** to confirm it.



4. Select the end of monitoring time from the list:

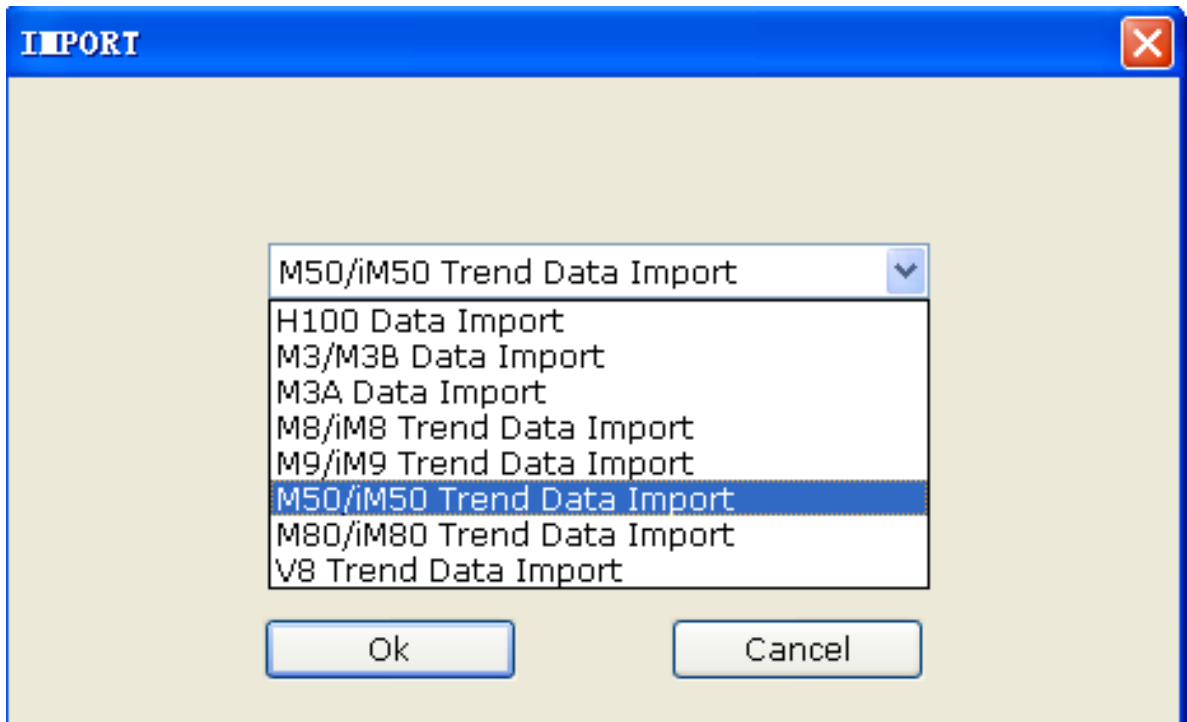


5. Click **OK** and the software completes data import.

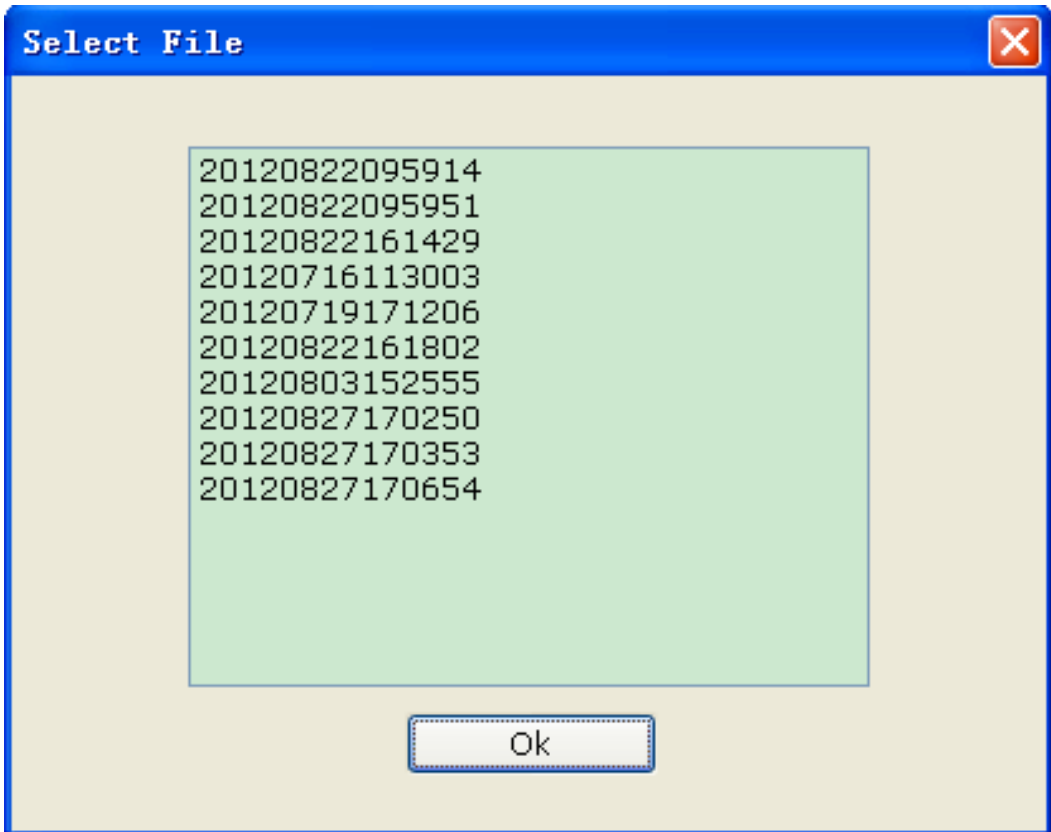


## M50/iM50/M80/iM80/V8 Data Import

1. Connect the USB disk to the USB port of PC.
2. Click **IMPORT** and select **M50/iM50 Trend Data Import**, **M80/iM80 Trend Data Import**, or **V8 Trend Data Import** from the drop-down list on the interface as below:



3. Select the file you need from the displayed list.



# Chapter 5 Review

You can refer to the following procedures to review the trend table.

1. Import data from a USB disk, PC or import real-time data.
2. Select a patient ID in the data list, and then click **TREND TABLE**, **TREND GRAPH**, **ALARM REVIEW**, **ARRHYTHMIA REVIEW**, **NIBP REVIEW**, **QUICK TEMP REVIEW**, **12-L REVIEW**, and **WAVE REVIEW** to review patient records.

## 5.1 Trend Table

Click **TREND TABLE** to review the trend table of a patient.

In **REAL TIME** mode, the trend table displays real-time data.

PATIENT	TREND TABLE	TREND GRAPH	ALARM REVIEW	ARRHYTHMIA REVIEW	NIBP REVIEW	QUICK TEMP REVIEW	12-L REVIEW	WAVE REVIEW			
PARAM\TIME	2012/08/09 16:25:58	2012/08/09 16:26:58	2012/08/09 16:27:58	2012/08/09 16:28:58	2012/08/09 16:29:58	2012/08/09 16:30:58	2012/08/09 16:31:58	2012/08/09 16:32:58	2012/08/09 16:33:58	2012/08/09 16:34:58	2012/08/09 16:35:58
HR (BPM)	---	---	---	---	---	---	---	---	---	---	---
RR (BPM)	---	---	---	---	---	---	---	---	---	---	---
SpO2 (%)	99	99	99	99	99	99	99	99	99	99	99
PR (BPM)	60	60	60	60	60	60	60	60	60	60	60

Start Time: 2012/08/09 16:25:58

End Time: 2012/08/09 18:14:58

Param Select

Resolution: 1 Minute

Set Time Interval

Print

Save As

XNUM

**Param Select:** Select the parameters to be displayed onscreen.

**Resolution:** Set the displayed resolution to **1 minute** or **1 second**. This option is unavailable for the data imported from M8/iM8, M9/iM9, M80/iM80, M50/iM50, and V8.

**Set Time Interval:** Set the start time and the end time for the trend table.

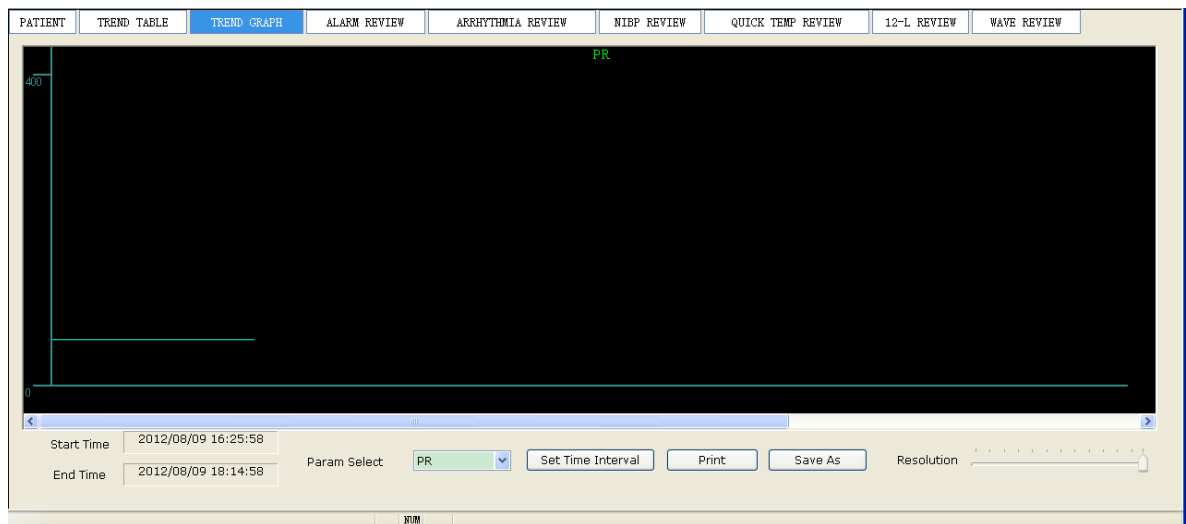
**Print:** Print the currently displayed trend table. 60 trend records can be printed at a time. Also, you can click **Set Time Interval** and set the period of the trend record to be printed on the pop-up interface.

**Save As:** Save the currently displayed trend table to PC.

## 5.2 Trend Graph

Click **TREND GRAPH** to review the trend graph of a patient. A maximum of 2-hour trend graph can be reviewed. You can set the time zone by a click **Set Time Interval**.

In **REAL TIME** mode, the trend graph can not be updated or set.



**Param Select:** Select the parameter to be displayed onscreen.

**Resolution:** Set the displayed resolution. This option is unavailable for the data imported from M3A, H100, M8/iM8, and M9/iM9.

**Set Time Interval:** Set the start time and the end time for the trend graph.

**Print:** Print the currently displayed trend graph.

**Save As:** Save the currently displayed trend graph to PC.

### 5.3 Alarm Review

Click **ALARM REVIEW** to review the alarm list of a patient.

In **REAL TIME** mode, the alarm list displays real-time data.

ALARM TIME	ALARM LEVEL	ALARM NAME	VALUE		
2012/08/09 18:06:43	***	ASYSTOLE	-1.0		
2012/08/09 16:28:57	**	SYS	119 mmHg		
2012/08/09 16:28:57	**	MAP	80 mmHg		
2012/08/09 16:25:59	**	ART SYS	16.0 Kpa		
2012/08/09 16:25:59	**	ART DIA	10.7 Kpa		
2012/08/09 16:25:59	**	ART MAP	12.4 Kpa		
2012/08/09 16:25:59	**	T1	96.8°F		
2012/08/09 16:25:59	**	T2	96.6°F		
2012/08/09 16:25:59	**	TD	1.8°F		

**Print:** Print the currently displayed alarm list.

**Save As:** Save the currently displayed alarm list to PC.

### 5.4 Arrhythmia Review

Click **ARRHYTHMIA REVIEW** to check the **ALARM TIME**, **ALARM LEVEL**, and **ALARM NAME**, as is shown in the following figure.



## 5.6 Quick Temp Review

Click **QUICK TEMP REVIEW** to check the time when the temp is measured and the value, as is shown in the following figure.

SERIAL NUMBER	MEASURE TIME	QUICK TEMP
1	2012/08/09 16:53:33	96.6°F
2	2012/08/09 16:46:51	96.8°F
3	2012/08/09 16:40:01	96.8°F

Print Save As

**Print:** Print the currently displayed temperature list.

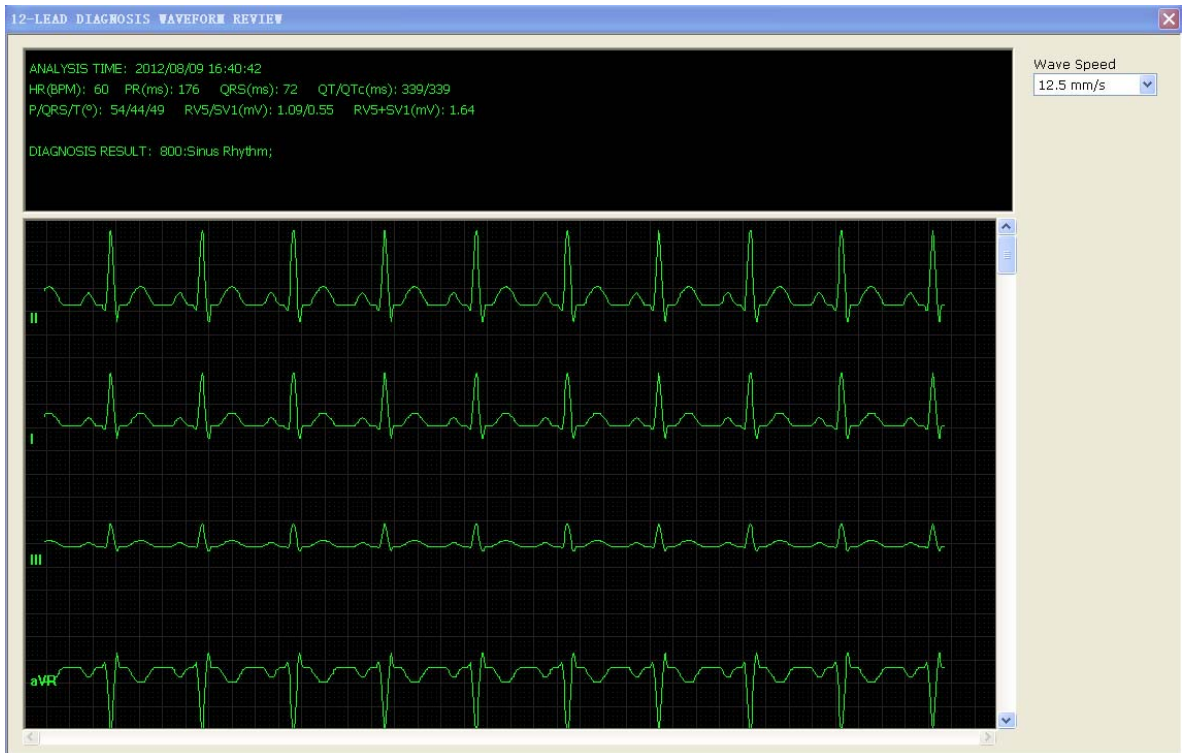
**Save As:** Save the currently displayed temperature list to PC.

## 5.7 12-L Review

Click **12-L REVIEW** to check the ANALYSIS TIME, DIAGNOSIS RESULT, PR, HR, etc, as is shown in the following figure.

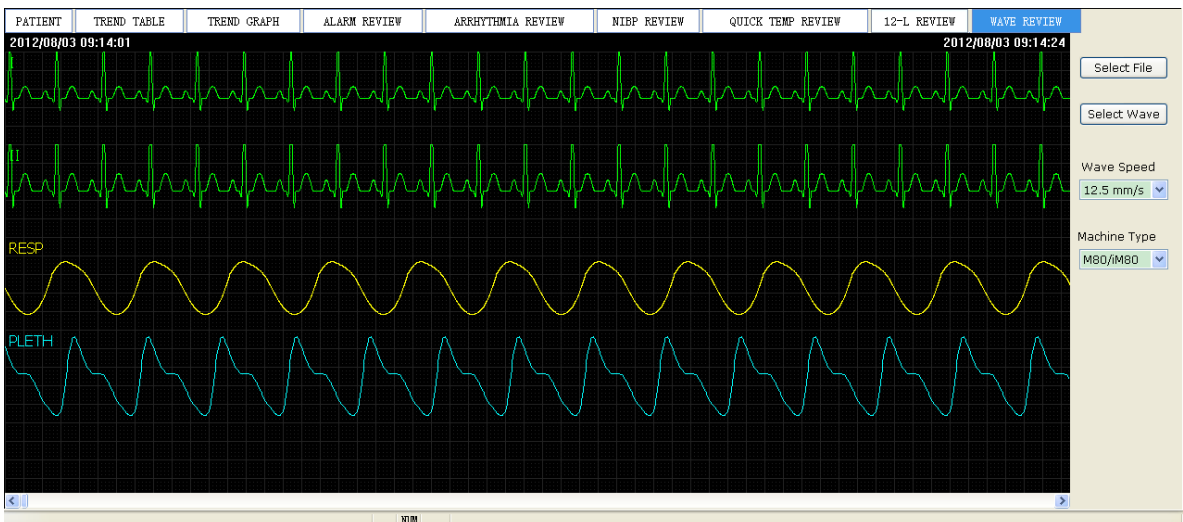
ANALYSIS TIME	HR(BPM)	PR(ms)	QRS(ms)	QT/QTc(ms)	P/QRS/T(°)	RV5/SV1(mV)	RV5+SV1(mV)	DIAGNOSIS RESULT
2012/08/09 16:40:42	60	176	72	339/339	54/44/49	1.09/0.95	1.64	000:Sinus Rhythm;
2012/08/09 16:40:35	60	176	72	339/339	54/44/49	1.09/0.95	1.64	000:Sinus Rhythm;

You can view the 12-lead diagnosis waveform with a double-click on any one of the records in the 12-L Review list. The following figure shows a 12-lead diagnosis waveform.



## 5.8 Wave Review

Click **WAVE REVIEW**, and then click **Select File** to choose a file, as is shown in the following figure.



**Select File:** Select a file that you need from the PC or USB disk.

**Select Wave:** Select a waveform or several waveforms that you need to display.



**Wave Speed:** Select a speed at which the wave moves.

**Machine Type:** Select a machine type that corresponds with the selected file type.

**NOTE:**

Please select the machine type before you import files.

## Chapter 6 Service

If you have any question about maintenance, technical specifications or malfunctions of devices, contact your local distributor.

Alternatively, you can send an email to EDAN service department at: [support@edan.com.cn](mailto:support@edan.com.cn).

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